

*Roncus yaginumai*, a New Pseudoscorpion from  
Montenegro, Yugoslavia  
(Pseudoscorpiones: Neobisiidae)

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**Abstract** A new cave-dwelling species, *Roncus yaginumai* ČURČIĆ, ČURČIĆ et DIMITRIJEVIĆ sp. nov., (Neobisiidae: Pseudoscorpiones) is described from southern Montenegro, Yugoslavia. It is illustrated and compared with its phenetically close congener, *R. vulcanius* BEIER, from south Hercegovina, Bosnia-Hercegovina. Notes are given on the habitat, distribution and teratology of this endemic species.

Pseudoscorpions collected in 1991 and 1992 from two caves in the vicinity of Podgorica and Virpazar (southern Montenegro, Yugoslavia), belong to a new species: *Roncus yaginumai* sp. nov., which is described below based on the series of 4 females. The representative of the genus *Roncus* was found for the first time from Montenegro.

All pseudoscorpion specimens under study were mounted on slides in Swan's fluid (gum chloral medium) and deposited in the collections of the Institute of Zoology, Faculty of Biology, University of Belgrade, Belgrade, Yugoslavia.

All setal designations follow BEIER (1932).

Neobisiidae CHAMBERLIN, 1930

*Roncus yaginumai* ČURČIĆ, ČURČIĆ et DIMITRIJEVIĆ, sp. nov.  
(Figs. 1–13; Table 1)

**Etymology.** This species is named in honour of the late Professor Takeo YAGINUMA, who greatly contributed to the taxonomy of arachnids.

**Specimens examined.** Holotype female, and paratype female, from a cave on the isle of Vranjina, Skadarsko Jezero Lake, near Podgorica, Montenegro, Yugoslavia, January 1992 (I. M. KARAMAN coll.); 1 paratype female (with an abnormal pedipalpal chela; ČURČIĆ *et al.*, 1996), from the same locality, January–February 1992 (same collector; collected together with a specimen of *Neobisium* sp.); and 1 paratype female, from the Golubija Pećina Cave, village Gornja Seoca, near Virpazar, Montenegro, Yugoslavia, 2 September 1991 (same collector).

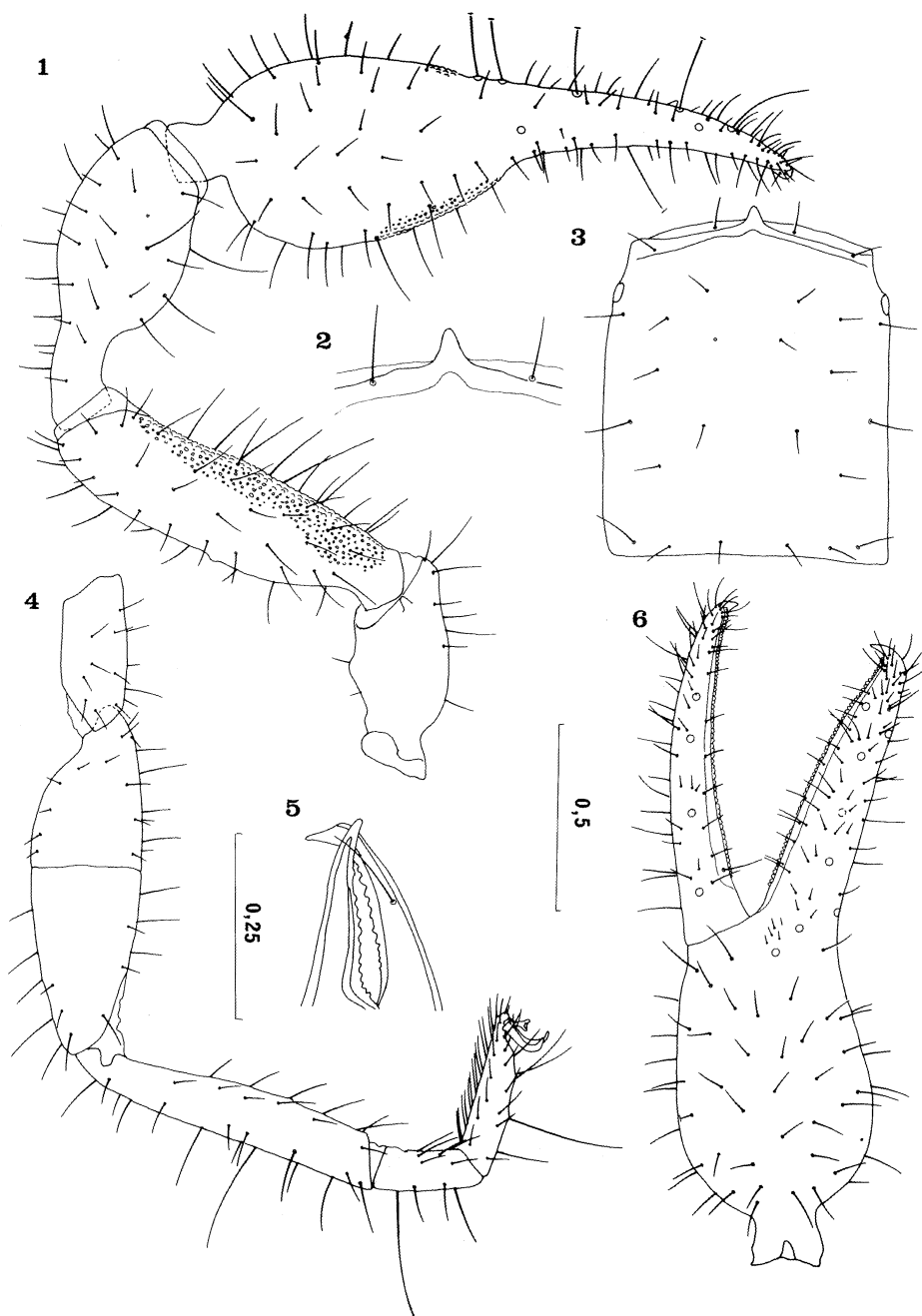
**Description.** Carapace longer than broad (Figs. 3, 8; Table 1). Epistome triangular or blunt apically (Figs. 2, 7). Eyes with flattened lenses (spot-like) (traces of tapetum visible). Setal formulae:  $4+6+4+4+2+6=26$ ,  $4+6+4+4+2+7=27$ ,  $4+6+4+4+2+6=26$ , and  $4+6+2+4+2+6=24$  setae (female).

Tergite I with 6–8 setae, tergite II with 7–11 setae, tergites III–X each with 9–13

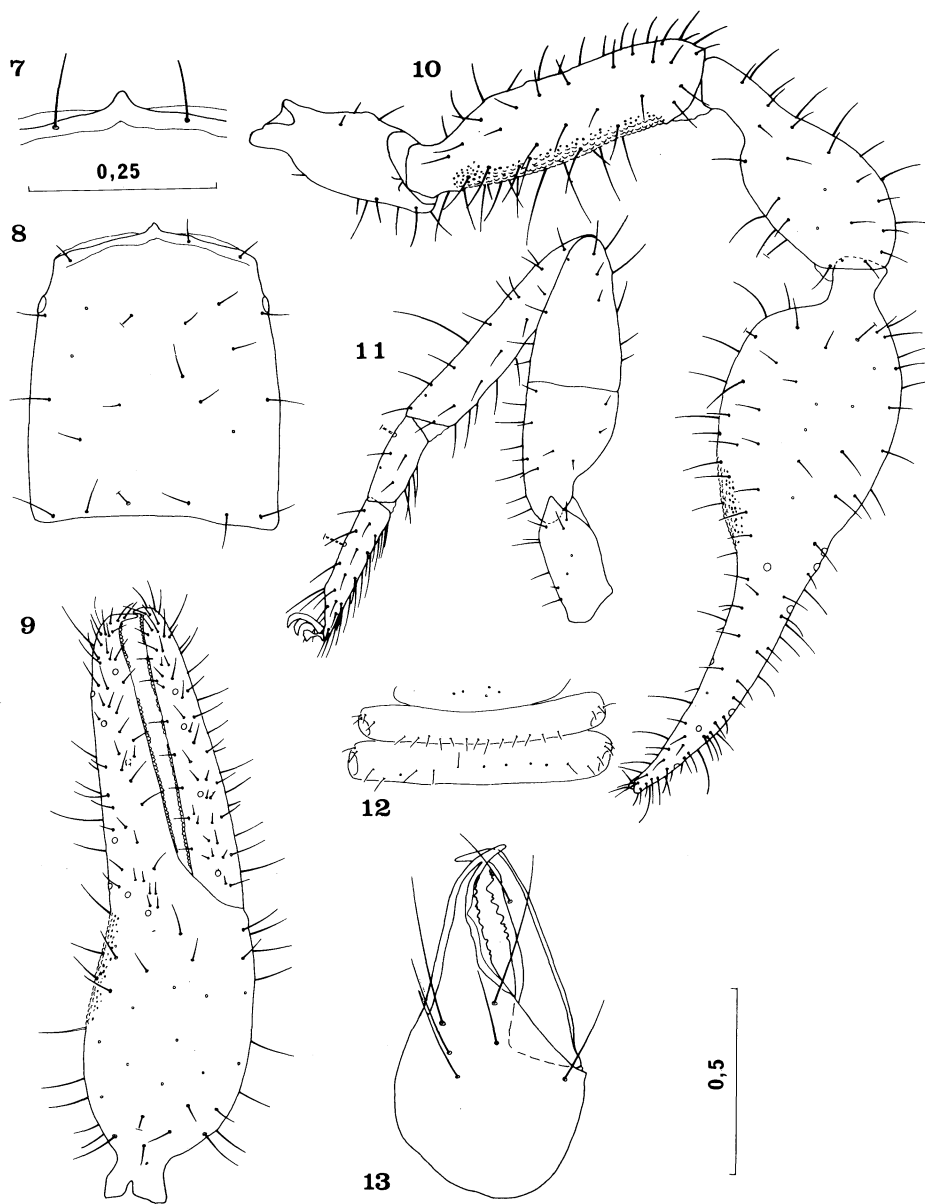
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Figs. 1-6. *Roncus yaginumai* sp. nov., holotype female, from a cave on the isle of Vranjina, Montenegro (Yugoslavia). — 1, pedipalp; 2, epistome; 3, carapace; 4, leg IV; 5, chelicerel fingers; 6, pedipalpal chela. Scales in mm.



Figs. 7-13. *Roncus yaginumai* sp. nov., paratype female, from the Golubija Pečina Cave, Montenegro (Yugoslavia). — 7, epistome; 8, carapace; 9, pedipalpal chela; 10, pedipalp; 11, leg IV; 12, female genital area; 13, chelicera. Scale in mm.

setae. Female genital area: sternite II with 6-10 microsetae, in the form of two distinguishable groups (each with 3-6 setae); sternite III with 13-17 posterior setae and 3 or

4 microsetae along each stigma. Sternite IV with 12 or 13 marginal setae and 3 or 4 suprastigmatic microsetae on either side. Sternites V–X each with 14–17 setae. Male genital area: unknown.

Galea (cheliceral spinneret) low and rounded (Figs. 5, 13). Cheliceral palm with 6, movable finger with one seta. Cheliceral dentition as in Figs. 5 and 13. Flagellum 8-bladed (1 short proximal blade and 6 or 7 longer blades distally, all blades denticulate), characteristic of the genus *Roncus*.

Apex of pedipalpal coxa (manducatory process) with 4 long setae. Pedipalpal trochanter smooth. Pedipalpal femur with interior granulations and a single exterior tubercle (Figs. 1, 10). Tibia tulip-shaped, smooth. Chelal palm either with some interior granulations (Fig. 10), or both with faint interior and a few exterior tubercles (Fig. 1). Microsetae proximal to *eb* and *esb* absent; distal to *eb* and *esb*, 6–10 microsetae developed (Figs. 6, 9). A single tubercle present on the laterodistal part of chelal palm. The trichobothrium *ist* is either equidistant from *isb* and *est*, or slightly closer either to *isb* or to *est* (Figs. 6, 9; ČURČIĆ *et al.*, 1996). Fixed chelal finger with 62–70 teeth, and movable chelal finger with 62–65 close-set teeth. Trichobothrial patterns as in Figs. 6 and 9.

Chelal fingers slightly longer than chelal palm and, in general, slightly longer than pedipalpal femur. Pedipalpal femur longer than carapace (Table 1).

Tibia IV, basitarsus IV, and telotarsus IV each with a single tactile seta (Figs. 4, 11). Tactile seta ratios are presented in Table 1.

*Teratology.* The paratype female from the Golubija Pećina Cave is missing the trichobothrium *st* on its left pedipalpal chela; the right chela is normal. In addition, the paratype female, from a cave on the isle of Vranjina, has an anomalous pedipalpal chela on the right; this rare developmental change has been described elsewhere (ČURČIĆ *et al.*, 1996).

*Remarks.* The new species is easily distinguished from its phenetically most similar congener, *R. vulcanius* BEIER, 1939, from southern Hercegovina, Bosnia-Hercegovina. It is relevant to note here that the name *R. vulcanius crassimanus* BEIER, 1939 (based on some pseudoscorpion specimens from a number of caves in Hercegovina) has been recently synonymized with *R. anophthalmus* (ELLINGSEN, 1910) (ČURČIĆ *et al.*, 1995).

From *R. vulcanius*, *R. yaginumai* sp. nov. is easily distinguished by the granulation of the pedipalpal femur (with faint interior granulations *vs.* with well-developed interior granulations) (Figs. 1, 10) (BEIER 1939: fig. 92), by the form of the epistome (knob-like *vs.* triangular), by the presence/absence of eyes (absent *vs.* present), by the ratio of the pedipalpal chelal length to breadth of females (3.10 *vs.* 3.35–3.63), by the length of the pedipalpal chelal palm of females (1.08 mm *vs.* 0.795–0.95 mm), by the ratio of the pedipalpal chelal finger length to chelal palm length (0.94 *vs.* 1.02–1.11), and by the form of the pedipalpal femur and tibia (less elongate *vs.* more elongate) (Figs. 1, 10; BEIER, 1939, fig. 92).

The paratype female from the Golubija Pećina Cave has body size generally smaller than the other type specimens; however, this phenomenon is due only to the noted intraspecific variation.

In spite of the fact that a great number of *Roncus* species are known from the regions bordering on Montenegro (BEIER 1939; ČURČIĆ 1988, 1995, 1996; ČURČIĆ *et al.*, 1995), *R. yaginumai* sp. nov. is the first representative of the genus, known to inhabit

Table 1. Linear measurements (in mm) and selected morphometric ratios in *Roncus yaginumai* sp. nov., from Montenegro, Yugoslavia. Abbreviation: TS ratio=tactile seta ratio.

Character	♀ ♀	
Body		
Length (1)	3.11	- 4.11
Cephalotorax		
Length (2)	0.81	- 1.02
Breadth	0.75	- 0.89
Abdomen		
Length	2.06	- 3.09
Breadth	0.86	- 1.37
Chelicerae		
Length (3)	0.49	- 0.67
Breadth (4)	0.28	- 0.31
Length of movable finger (5)	0.35	- 0.41
Length of galea	0.01	
Pedipalps		
Length with coxa (6)	4.49	- 5.33
Length of coxa	0.63	- 0.74
Length of trochanter	0.51	- 0.65
Length of femur (7)	0.92	- 1.09
Breadth of femur (8)	0.25	- 0.29
Ratio 7/8	3.52	- 3.89
Ratio 7/2	1.07	- 1.15
Length of tibia (9)	0.76	- 0.91
Breadth of tibia (10)	0.34	- 0.39
Ratio 9/10	1.95	- 2.53
Length of chela (11)	1.64	- 1.94
Breadth of chela (12)	0.49	- 0.535
Ratio 11/12	3.35	- 3.63
Length of chelal palm (13)	0.795	- 0.95
Ratio 13/12	1.62	- 1.775
Length of fixed chelal finger (14)	0.83	- 0.99
Ratio 14/13	1.02	- 1.11
Leg IV		
Total length	2.935	- 3.58
Length of coxa	0.425	- 0.58
Length of trochanter (15)	0.36	- 0.48
Breadth of trochanter (16)	0.17	- 0.185
Ratio 15/16	2.12	- 2.82
Length of femur (17)	0.78	- 0.96
Breadth of femur (18)	0.26	- 0.305
Ratio 17/18	2.965	- 3.15
Length of tibia (19)	0.71	- 0.905
Breadth of tibia (20)	0.13	- 0.16
Ratio 19/20	5.31	- 6.03
Length of basitarsus (21)	0.24	- 0.29
Breadth of basitarsus (22)	0.10	- 0.13
Ratio 21/22	2.23	- 2.64
Length of telotarsus (23)	0.42	- 0.48
Breadth of telotarsus (24)	0.08	- 0.10
Ratio 23/24	4.70	- 5.625
TS ratio - tibia IV	0.525	- 0.62
TS ratio - basitarsus IV	0.18	- 0.26
TS ratio - telotarsus IV	0.34	- 0.40

the studied area. It is a troglophilic form (although probably restricted only to cave environments), and seems to be endemic to south Montenegro, Yugoslavia. In view of the exceptional variability of both epigean and cavernicolous fauna of pseudoscorpions in the Dinaric Karst (where Montenegro belongs; ČURČIĆ, 1988), one may assume that the Montenegrine *Roncus*-complex is also diverse. This is further supported by the existence of at least 20 different *Roncus* species (sampled in our collection), all new to science, which are awaiting both for description and naming (ČURČIĆ, in prep.).

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